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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/805,142

03/19/2004

John H. Roscnfeld

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10/10/2006

DUANE MORRIS LLP

IP DEPARTMENT

30 SOUTH 17TH STREET

PHILADELPHIA, PA 19103-4196

EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3744

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/805,142	Applicant(s) ROSENFELD ET AL.	
	Examiner Tho v. Duong	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3,5,11-12 and 17-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Khurstalev et al. (US 6,536,510). Khurstalev discloses (figures 2-7) a capillary assisted loop thermosiphon apparatus comprising a plurality of evaporators (30) connected by a vapor line (32) to a condenser (70); a liquid line (34) connecting the condenser and the evaporators; the evaporators (30) is in the direction of gravity from the condenser such that the condenser supplies liquid under gravity induced pressure to the evaporators, and the evaporators have a vertical capillary porous sintered wick (64) in which liquid wicks in the direction of gravity; the wick (64) extends vertically against a heat absorbing sheet (42) on the evaporator; and a vapor collection cavity extends vertically along the wick; the vapor collection cavity being connected to the vapor line; the multiple evaporators are interconnected along their bottom to share a common liquid reservoir (31); a liquid line irrigator (54) connected to the liquid line supplies liquid under gravity to the wick; the vapor line (32) connects to a first group manifold (75) having multiple outlets for connecting respective vapor lines of the multiple evaporators; the liquid line connects to a second group manifold (76) having multiple outlets for connecting respective liquid line irrigators (54); and the respective liquid line irrigators distribute liquid to respective wicks (64) of the multiple evaporators.

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Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Conroy et al. (Multiple Flat Plate Evaporator Loop Heat Pipe Demonstration). Conroy et al. discloses (figures 4-6 and pages 3-4) all of applicant's claimed invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eastman (US 4,352,392) discloses a mechanically assisted evaporator surface.

Tonosaki et al. (US 2004/0069459A1) discloses a cooling device.

Marsala (US 6,679,081) discloses a pumped liquid cooling system using phase change refrigerant.

Basiulis (US 4,503,483) discloses a heat pipe cooling module for high power circuit board.

Kobayashi et al. (US 6,840,304) discloses an evaporator, a heat absorber and a thermal transport system.

Lorne D. McConnel (US 3,609,206) discloses an evaporator cooling system for insulated bus.

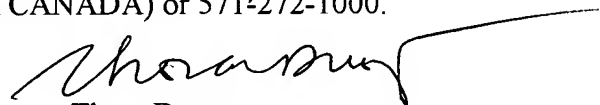
Ogushi et al. (US 6,330,907) discloses an evaporator and loop type heat pipe.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keasel Eric can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tho v Duong
Primary Examiner
Art Unit 3753



TD
September 30, 2006